Claims

1. A particulate label which comprises a particulate support to which is bound at least two signal generating moieties in a predetermined amount and ratio, each of which moieties generates, *in situ*, a signal different from that generated by the other(s) and wherein each of said signals can be varied over a series of gradations.

2. The label of claim 1 wherein said particulate support is coupled to at least three said signal generating moieties.

3. The label of claim 1 wherein said signal generating moieties are color generating moieties.

4. The label of claim 3 wherein the color generating moieties are fluorophores.

5. The label of claim 1 wherein the particulate support is a latex bead.

6. The label of claim 1 which is further associated with a reagent.

7. The label of claim 6 wherein the reagent is an antibody.

8. The label of claim 6 wherein the reagent is a peptide generated from a cDNA library.

9. The label of claim 6 wherein the reagent is a substance in a combinatorial chemistry library.

10. The label of claim 6 wherein the reagent is an oligonucleotide.

11.	The label of claim 6 wherein said reagent is covalently linked to the label.

12.	The label of claim 11 wherein the covalent linkage is a disulfide or carboxamide linkage.

13.	The label of claim 6 wherein the reagent is noncovalently linked to the label.

14.	The label of claim 13 wherein the noncovalent linkage is an epitope/antibody linkage or a histidine/Ni-chelator linkage or comprises an agar layer.

15.	The label of claim 2 which is further associated with a reagent.

16.	The label of claim 15 wherein the reagent is an antibody.

17.	The label of claim 15 wherein the reagent is a peptide generated from a cDNA library.

18.	The label of claim 15 wherein the reagent is a substance in a combinatorial chemistry library.

19.	The label of claim 15 wherein the reagent is an oligonucleotide.

20.	The label of claim 15 wherein said reagent is covalently linked to the label.

21.	The label of claim 20 wherein the covalent linkage is a disulfide or carboxamide linkage.

22. The label of claim 15 wherein the reagent is noncovalently linked to the label.

23. The label of claim 22 wherein the noncovalent linkage is an epitope/antibody linkage or a histidine Ni-chelator linkage or comprises an agar layer.

24. A collection of the particulate labels of claim 1 wherein said collection comprises multiplicities of said labels having different ratios and/or amounts of said signal generating moieties so each label has a different hue.

25. A collection of the particulate labels of claim 6 wherein said collection comprises multiplicities of said labels having different ratios and/or amounts of said signal generating moieties so each label has a different hue, and wherein each label of a given hue is associated with a different known reagent.

26. A collection of the particulate labels of claim 15 wherein said collection comprises multiplicities of said labels having different ratios and/or amounts of said signal generating moieties so as to have a different hue, and wherein each label of a given hue has a different known reagent.

27. The collection of claim 24 wherein said signal generating moieties are color generating moieties.

28. The collection of claim 27 wherein the color generating moieties are fluorophores.

29. The collection of claim 25 wherein said signal generating moieties are color generating moieties.

30. The collection of claim 29 wherein the color generating moieties are fluorophores.

31. The collection of claim 26 wherein said signal generating moieties are color generating moieties.

32. The collection of claim 31 wherein the color generating moieties are fluorophores.

33. A method to assess a sample for its constituent components which method comprises contacting said sample with the collection of claim 25 and determining which labels are bound and which labels are not bound by said sample.

34. A method to assess a sample for its constituent components which method comprises contacting said sample with the collection of claim 26 and determining which labels are bound and which labels are not bound by said sample.

35. A system for the detection of an interaction between a multiplicity of reagents and at least one target which system comprises the collection of particulate labels of claim 29 along with a detecting means for each different wavelength band of each color generating moiety.

36. The system of claim 35 wherein said particulate labels are coupled to a competing analog of said target contained in a position wherein the labels can be detected, and which further includes a means for flowing sample containing said target past said labeled analog whereby any target in the sample competes with the analog for the label.

37. The system of claim 36 wherein said target is a drug or a metabolite of a drug.

38.   The system of claim 36 which comprises analogs for a multiplicity of targets.

5   39.   A system for the detection of an interaction between a multiplicity of reagents and at least one target which system comprises the collection of particulate labels of claim 31 along with a detecting means for each different wavelength band of each color generating moiety.

10   40.   The system of claim 39 wherein said particulate labels are coupled to a competing analog of said target contained in a position whereby the labels can be detected, and which further includes a means for flowing sample containing said target past said labeled analog whereby any target in the sample competes with the analog for the label.

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41.   The system of claim 40 wherein said target is a drug or a metabolite of a drug.

42.   The system of claim 40 which comprises analogs for a multiplicity of

20   targets.